

IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A hydrophobic surface-coated substrate which comprises a substrate, a silicon oxide anchor layer on said substrate, and a hydrophobic coating layer covering a surface of said anchor layer, wherein said surface of said silicon dioxide oxide anchor layer exhibits a root mean square (RMS) surface roughness of less than about 6.0 nm and a haze value of less than about 2.0%.
2. (Canceled)
3. (Previously Presented) The substrate of claim 1, wherein the anchor layer exhibits a RMS surface roughness of greater than about 4.0 nm.
4. (Original) The substrate of claim 1, wherein the hydrophobic coating further comprises the humidified vapor-deposited reaction product of at least one alkylchlorosilane applied over the anchor layer.
5. (Original) The substrate of claim 4, wherein the alkylchlorosilane is dimethyldichlorosilane or trimethylchlorosilane.
6. (Original) The substrate of claim 1, wherein the hydrophobic coating comprises a layer of a humidified vapor-deposited reaction product of dimethyldichlorosilane (DMDCS) on the silicon oxide anchor layer, and a layer of a humidified vapor-deposited reaction product of trimethylchlorosilane (TMCS) applied over the DMDCS layer.
7. (Original) The substrate of claim 1, wherein the hydrophobic coating comprises a layer of polydimethylsiloxane (PDMSO) chemically bound to said anchor layer.
8. (Original) The substrate of claim 1, wherein the hydrophobic coating comprises a layer of cross-linked polysiloxane chemically bound to said anchor layer.

9. (Original) The substrate of claim 8, wherein the hydrophobic coating comprises at least one layer which is the humidified vapor-deposited reaction product of dimethyldichlorosilane (DMDCS) or trimethylchlorosilane (TMCS) applied over the cross-linked polysiloxane layer.

10. (Cancelled)

11. (Cancelled).

12. (Currently Amended) The substrate of ~~claim 10~~ claim 1, wherein the anchor layer exhibits a haze value of less than about 1.5%.

13. (Previously Presented) A substrate as in claim 1, wherein anchor layer is comprised of a humidified reaction product of silicon tetrachloride vapor deposited at a relative humidity of less than about 50%.

14. (Original) The substrate of claim 13, wherein the silicon tetrachloride is vapor-deposited at a relative humidity of less than about 45%.

15. (Original) The substrate of claim 13, wherein the silicon tetrachloride is vapor-deposited at a relative humidity of less than about 40%.

16. (Original) The substrate of claim 13, wherein said hydrophobic coating is comprised of the humidified reaction product of said silicon tetrachloride and an alkylchlorosilane.

17. (Original) The substrate of claim 16, wherein said alkylchlorosilane includes trimethylchlorosilane (TMCS).

18. (Original) The substrate of claim 17, wherein said silicon tetrachloride and TMCS are vapor-deposited as a mixture.

19. (Original) The substrate of claim 18, wherein said mixture contains a ratio of said silicon tetrachloride to TMCS of between about 4.0:0.05 to about 4.0:1.5.

20. (Original) The substrate of claim 18, wherein said mixture contains a ratio of said silicon tetrachloride to TMCS of about 4.0:1.0.

21 – 54 (Cancelled).

55. (Previously Presented) A coated glass substrate made by a process comprising:

- (a) contacting a surface of the glass substrate to be coated with a silicon tetrachloride vapor for a time sufficient to form a silicon oxide layer on the surface of the glass substrate; and then
- (b) simultaneously contacting the silicon oxide layer with vapors of silicon tetrachloride and dimethyldichlorosilane (DMDCS) for a time sufficient to form a cross-linked layer of polydimethylsiloxane (PDMSO).

56. (Original) The substrate of claim 4, wherein the alkylchlorosilanes comprise dimethyldichlorosilane and methyltrichlorosilane.

57. (Original) The substrate of claim 4, wherein the alkylchlorosilanes are dimethyldichlorosilane and methyltrichlorosilane and are added in equimolar amounts.

58. (Original) The substrate of claim 56 wherein the ratios of dimethyldichlorosilane and methyltrichlorosilane are in the range of from 5 part to 1 part to about 1 part to 3 part respectively by weight.

59. (Original) The substrate of claim 56 wherein the alkyl chlorosilane layer is capped with methyltrichlorosilane.

60. (Previously Presented) The substrate of claim 56 wherein the alkyl chlorosilane layer is capped with $\text{CF}_2\text{FCO}(\text{CH}_2)_3\text{SiCl}_2\text{CH}_3$.

61. (Original) The substrate of claim 1 wherein the hydrophobic coating comprises a layer of a humidified vapor-deposited reaction product of dimethyldichlorosilane and methyltrichlorosilane on the silicon oxide anchor layer, and a

capping layer of a humidified vapor-deposited reaction product of trimethyl chlorosilane applied over the DMDCS and TMCS layer.

62. (Previously Presented) The substrate of claim 4 wherein silicon tetrachloride is added to a reaction chamber in an equimolar amount with at least one alkylchlorosilane selected from the group consisting of dimethyldichlorosilane, methyltrichlorosilane, trimethylchlorosilane and chlorofluoroalkylsilane.

63. (Previously Presented) The substrate of claim 62 comprising $\text{CF}_2\text{FCO}(\text{CH}_2)_3\text{SiCl}_2\text{CH}_3$ as a capping layer.

64 – 70 (Canceled).

71. (Previously Presented) The substrate of claim 1, wherein the anchor layer exhibits a RMS surface roughness of less than about 5.0 nm.

72. (Previously Presented) The substrate of claim 1, wherein the anchor layer exhibits a RMS surface roughness of between about 4.0 nm to about 6.0 nm.

73. (Currently Amended) A hydrophobic surface-coated substrate which comprises a substrate, a silicon oxide anchor layer on said substrate, and a hydrophobic coating layer covering a surface of said anchor layer, wherein said surface of said anchor layer exhibits a root mean square surface roughness of greater than about 4.0 nm and less than about 6.0 nm and wherein the hydrophobic coating layer is the humidified vapor-deposited reaction product of at least one alkylchlorosilane which is selected from the group consisting of dimethyldichlorosilane (DMDCS), (DMDCS), methylchlorosilane (MCS) and trimethylchlorosilane (TMCS).

74. (Previously Presented) The substrate of claim 73, wherein the hydrophobic coating comprises a layer of a humidified vapor-deposited reaction product of DMDCS on the silicon oxide anchor layer, and a layer of a humidified vapor-deposited reaction product of TMCS applied over the DMDCS layer.

75. (Previously Presented) The substrate of claim 73, wherein the hydrophobic coating comprises a layer of polydimethylsiloxane (PDMSO) chemically bound to said anchor layer.

76. (Previously Presented) The substrate of claim 73, wherein the hydrophobic coating comprises a layer of cross-linked polysiloxane chemically bound to said anchor layer.

77. (Previously Presented) The substrate of claim 76, wherein the hydrophobic coating comprises at least one layer which is the humidified vapor-deposited reaction product of dimethyldichlorosilane (DMDCS) or trimethylchlorosilane (TMCS) applied over the cross-linked polysiloxane layer.

78. (Previously Presented) The substrate of claim 73, wherein the alkylchlorosilane includes dimethyldichlorosilane and methyltrichlorosilane in equimolar amounts.

79. (Previously Presented) The substrate of claim 73, wherein the alkylchlorosilane includes dimethyldichlorosilane and methyltrichlorosilane in ratios of dimethyldichlorosilane and methyltrichlorosilane within range of from 5 part to 1 part to about 1 part to 3 part respectively by weight.